

REMARKS

STATUS OF CLAIMS

Claims 1-18 have been pending.

Claims 1, 3-8 and 10-18 are rejected under 35 USC 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Sellers (US Patent No. 5,666,541).

Claims 2 and 9 are objected as being allowable if rewritten in independent form.

Claims 1, 7, 8, 14, 17, and 18 are amended.

Thus, claims 1-18 remain pending for reconsideration, which is respectfully requested.

No new matter has been added in this Amendment. The foregoing rejection is hereby traversed.

IN THE TITLE

The title of the invention, taking into consideration the Examiner's comments, is replaced. Withdrawal of the objection to the title is requested.

IN THE DRAWINGS

In the Office Action at item 4, the Examiner objected to the drawings that FIGS. 4 and 5 should be designated by a legend such as --PRIOR ART--. To overcome this objection, two (2) replacement sheets for FIGS. 4 and 5 are submitted herewith. FIGS. 4 and 5 are changed to include the legend --PRIOR ART--. Approval and entry of the changes to the Drawings is respectfully requested. Withdrawal of the objections to the drawings is respectfully requested.

IN THE SPECIFICATION

According to the foregoing, the specification is amended so that the paragraph starting on page 6, line 12 is consistent with the amended claim 1, and to correct a typographical error on page 14.

REJECTION

THE PRESENT CLAIMED INVENTION

Claims 1-18 are pending, of which claims 1, 7, 8, 14 and 17-18 are independent. The independent claims 1 and 7 are amended to further emphasize the patentably distinguishing

features of the present invention. The independent claims 8, 14, and 17-18 are amended to improve form only and the claim amendments are not narrowing claim amendments for purposes of overcoming the relied upon references to reject these claims.

In particular, in contrast to Sellers, the present claimed invention as recited in independent claims 1 and 7, using claim 1 as an example, provides:

an operational mode for the functional units when started up from either said power-off state or said suspend state being a normal operational mode use-enabling the functional units in their entirety including the man-machine interface, and an exclusive operational mode use-enabling some of the functional units on starting up from either said power-off state or said suspend state, including said interface section having executed a wake-up instruction performed input/output processing of data, said memory, said processor and said chipset; wherein

one of said normal operation mode and said exclusive operational mode areis selected between by said interface section having executed aexecuting the wake-up instruction; and

when said exclusive operational mode is terminated, the information-processing device goes to its pre-start-up state, either said power-off state or said suspend state (amended claim 1).

Support for the claim amendments can be found, for example, on page 17, lines 11-17, and FIG. 3; and page 31, line 21 to page 33, line 25, and FIGS. 9-11, of the present Application.

AAPA AND SELLERS

The Examiner relies on Sellers to reject the present claimed invention's patentably distinguishing feature of "exclusive mode operational mode," as recited in independent claims 1, 7, 8, 14 and 17-18.

A definition of "reduced power mode" in Sellers is a state where full power is supplied to those components which require a period of time to come up to full operation, such as HDD, monitor, and CPU, while other components which can be almost immediately turned on are driven at reduced (or zero) power (column 2, line 65 to column 3, line 8). Also Sellers discloses "sleep mode" which reduces power supply. As disclosed in column 3, lines 38-41: [i]n sleep mode, power is typically reduced (even to zero) to the monitor and HDD, and reduced to the CPU to keep it alive but not fully operational.

Regarding wake-up, Sellers switches the components in the "reduced power mode" (where full power is supplied to components such as CPU and power is reduced (even to zero) to other components) into a "full power mode." In other words, Sellers discloses a method to

switch a state, where the CPU is in full power and a portion of the computer is driven at reduced power, into a fully powered operation mode. In Sellers, the transition time for shifting to full power operation mode from low power state is shortened by not decreasing the power supply to the components which require a period of time to come up to full power state from low power state. In Sellers, reduced power consumption is enabled by saving power from the components in the full operational mode when there is no wake-up signal. In Sellers, upon a wake-up signal, the mode is switched to the full operational mode.

However, in contrast to Sellers, the present claimed invention switches “suspend mode” (where most of the functions including CPU are turned off) or “power-off state” into “exclusive operational mode” (where only a part of the functions are turned on) or “normal operational mode.” In other words, the present claimed invention is directed to switching a state, where most of the main **functions** (including CPU) are turned off, into **a state where only a part of the functions are turned on** (i.e., “exclusive operational mode”). According to the present invention, a shortened transition time from either “power-off state” or “suspend state” to the “exclusive operational mode” is achieved by supplying operational power only to resources used to operate necessary functions. In other words, in the present invention reduced power consumption is enabled, with wake-up conditions, by supplying power only to functions which are used, so that only a part of the functions are switched into operational mode (i.e., “exclusive operational mode”) by a wake-up signal. See, FIGS. 9-11 of the present Application, in which, for example, upon access by the refrigerator 252, in the “exclusive operational mode” electric power is supplied only to the CPU 401, the chipset 402, the memory 405, the interface 431, the HDD 406, and a part of the interface 432 and the modem 433 as shown by bold lines of FIG. 11.

Therefore, the patentably distinguishing differences between the present invention and Sellers is as follows:

1) switched “exclusive operational mode use-enabling some of the functional units on starting up from either said power-off state or said suspend state” (i.e., “an exclusive operational mode use-enabling some of the functional units on starting up from either said power-off state or said suspend state, ... wherein one of said normal operation mode and said exclusive operational mode areis selected between by said interface section having executed executing the wake-up instruction; ...”) (e.g., amended claim 1). See also, independent claims 7, 8, 14 and 17-18. For example, in contrast to AAPA and Sellers, the present claimed invention as recited in claim 8 provides, “one of said normal operation mode and said exclusive

operational mode ~~areis~~ selected between ***according to start-up conditions***" (emphasis added).

2) "said interface section having ~~a wake-up instruction performed input/output processing of data~~ ...", such that during the "exclusive operational mode" the interface section performs, for example, input/output processing of data, as described in page 31, line 21 to page 33, line 25, and FIGS. 9-11, of the present Application (i.e., "an exclusive operational mode use-enabling some of the functional units on starting up from either said power-off state or said suspend state, including said interface section having ~~a wake-up instruction performed input/output processing of data~~, said memory, said processor and said chipset; wherein one of said normal operation mode and said exclusive operational mode ~~areis~~ selected between by said interface section having executed ~~a~~ executing the wake-up instruction; ...") (e.g., amended claim 1). See also, amended independent claim 7.

The benefits of the present claimed invention are as follows: shortened transition time from "suspend state" or "power-off state" into the "exclusive operational mode" as shown in FIGS. 3 and 9-11 of the present Application. And a benefit of switched "exclusive operational mode" by a wake-up signal and the idea of reduced power consumption by switching from a "power-off state" or a "suspend state," where most of the main ***functions*** (including CPU) are turned off, into ***a state where only a part of the functions are turned on*** (i.e., "exclusive operational mode"). According to the present invention, a shortened transition time from either "power-off state" or "suspend state" to the "exclusive operational mode" is achieved by supplying operational power only to resources used to operate necessary functions. In other words, in the present invention reduced power consumption is enabled, with wake-up conditions, by supplying power only to functions which are used, so that only a part of the functions are switched into operational mode (i.e., "exclusive operational mode") by a wake-up signal. See, FIGS. 9-11 of the present Application, in which, for example, upon access by the refrigerator 252, in the "exclusive operational mode" electric power is supplied only to the CPU 401, the chipset 402, the memory 405, the interface 431, the HDD 406, and a part of the interface 432 and the modem 433 as shown by bold lines of FIG. 11.

Other differences of the present claimed invention's "exclusive operational mode use-enabling some of the functional units on starting up from either said power-off state or said suspend state" over Sellers' "reduced power mode" can be summarized in the attached example diagrams. As shown in the attachment example FIGS. 1 and 2, in the "reduced power mode" of Sellers, a keyboard controller (interface) which receives a wake-up signal is in the

"reduced power mode," while in the "exclusive operational mode" of the present claimed invention, Bluetooth IF (interface) which receives a wake-up signal is in the operational mode for operating the Bluetooth IF, as shown in FIG. 8 and page 22, line 24 to page 26, line 8.

Also as shown in the attachment example FIGS. 3 and 4, expected mode shifts and definitions of "wake-up" between Sellers and the present claimed invention are different, as follows. Sellers requires power supply to a drive unit, such as the CPU, in Seller's defined "reduced power state," because the CPU is a component which requires a period of time to come up to full operation (column 2, line 65 to column 3, line 8). In contrast to AAPA and Sellers, either alone or if combined, in the present claimed invention, the CPU can be turned off and still achieve via the "exclusive operational mode" the shortened transmission time and the reduced power consumption of the present invention.

In particular, there is no suggestion in the AAPA and the Examiner does not provide any evidence of motivation that one skilled in the art would combine AAPA with Sellers and/or modify a combined system of AAPA and Sellers to achieve the present claimed invention. Therefore, the present claimed invention is not obvious in view of AAPA and Sellers.

CONCLUSION

In view of the remarks withdrawal of the rejection of claims 1-18 and allowance of claims 1-18 is respectfully requested.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Respectfully submitted,
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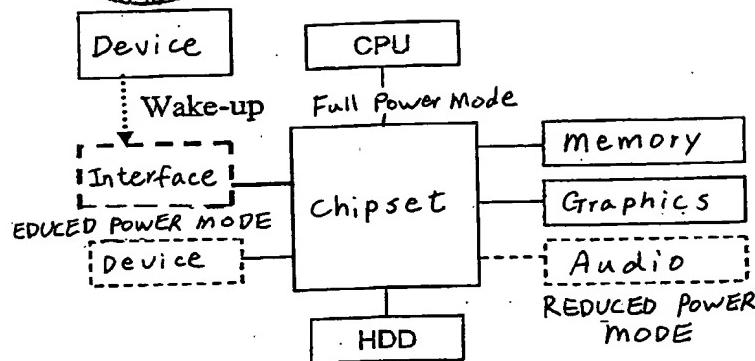


Fig.1 Seller : Reduced Power Mode

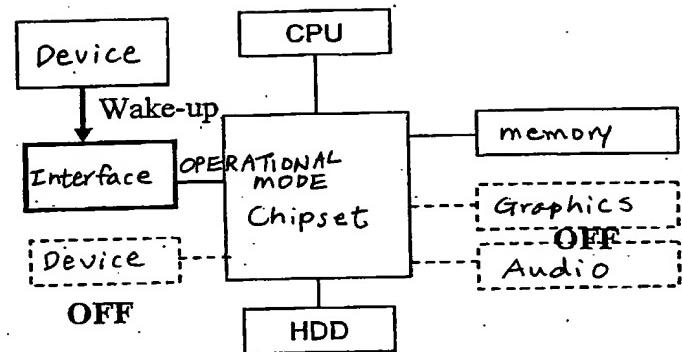


Fig.2 Present Invention : Exclusive Operational mode

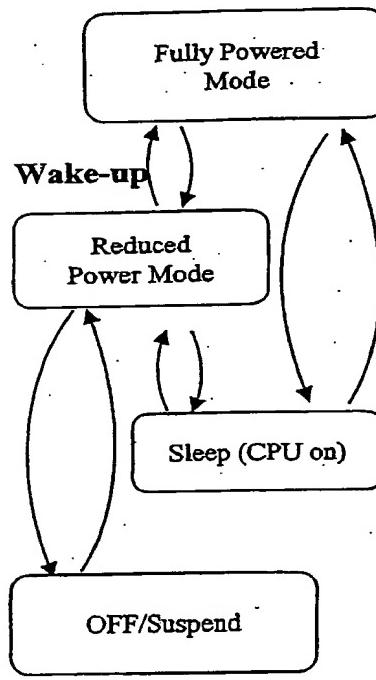


Fig.3 Seller: Mode Shift

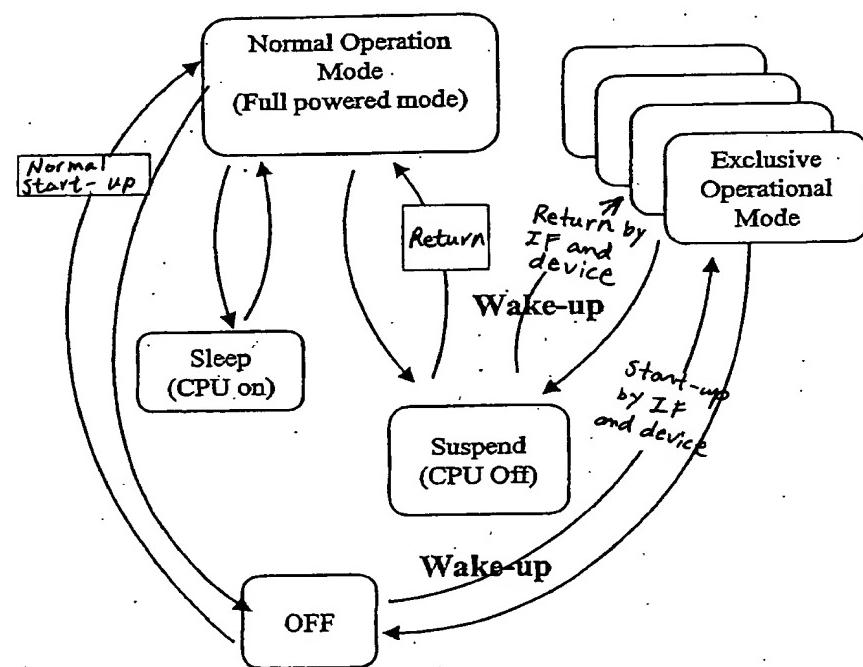


Fig.4. Present Invention : Mode Shift

Attachment